THE MODEL AND THE EFFECT OF SUPPLY CHAIN VARIABLE ON MARKETING PERFORMANCE AND THE ADVANTAGE OF SUSTAINABLE COMPETITION, A CASE STUDY CONDUCTED IN WEDORO - SIDOARJO, EAST JAVA

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ABSTRACT

This paper investigated the improvement of model started from the analysis step of measurement, structural equation, and the modification of model. The method employed was field research which was continued up to simulation modeling. The result showed that the model obtained was quite good. Meanwhile, the Supply Chain from the suppliers, manufacturers, distributors, and customers to the marketing performance and the advantage of sustainable competition were significant.

Key words: SEM, variable supply chain, marketing performance, advantage of sustainable competition.

1. INTRODUCTION

East Java is a prospective area which is supported by some good factors, such as social society, economic growth, and well secured. There is one village named Wedoro that belongs to Kabupaten Sidoarjo, is one industrial area of shoes and sandals. This area is famous for its regional shopping place for shoes and sandals. This place is also said as one of the economic motivators in Sidoarjo. This condition must be sustained started from today due to the fact that this atmosphere has become the economic resources required by many people. This attracted the researcher to conduct the research on the shoe and sandal industry by making a complete model started from the supply chain variable that consists of suppliers, manufacturers, distribution, customers, marketing performance, and the advantage of sustainable competition. The concept of Supply Chain Management (SCM) might cause the process ran effectively, efficiently, and productively, so that this model might be useful to rearrange a good strategy and technique of a business.

Based on the observation in the field, there are 5 kinds of suppliers in the shoe and sandal industry. They are supplier for leather (X1), accessories supplier (X2), sol supplier (X3), yarn supplier (X4), and glue supplier (X5). Among these 5 suppliers, sol and accessories suppliers do not often satisfy and adjust to the order (demand). This condition might cause the process of production become hampered. This could happen because the raw materials required were dependent. The hampered problem could also happen for the half-finished product. This could be known that the demand (order) was higher than the production. However, the problem did not only happen in terms of the supplier and manufacturing but also in the goods distribution. For example: when there was the newest trend model (up-to-date), usually, the customers buy in a great number to resell in a smaller number. And they want the payment system should be in soft payment (not in cash). This means that they want to pay the goods after the goods are sold out. However, it might happen that the payment could be delayed if the customer gets another offer from other competitors who provide lower price. This product was usually imported from China which was promoted very incessantly. This might affect to the marketing performance, and the advantage of sustainable competition. Therefore, the problems coming from some factors like suppliers, manufacturers, distributors, and customers, might cause a big impact to that industrial area that has been known as an economic motivator, especially in Sidoarjo.

Concerning with the explanation above, it is known that there is a close relation among those variables of Supply Chain Management (SCM). Moreover, marketing performance that becomes the achievement of organization can be seen from the work result of marketing, [1]. Therefore, if marketing performance is supported by a suitable indicator, the sustainable competitive advantage will be achieved. This shows that there is an effect and relationship between marketing performance and sustainable competitive advantage [2].This means that marketing performance will influence sustainable competitive advantage. Meanwhile, marketing performance as an indicator is measured from the growth of selling and customer, the volume of selling, information system, work motivation, and customer satisfaction. [3]

The sustainable competitive advantage is measured from the quality of product, competitive price, and the varieties of products available. Leather, as one of the variables, the purchasing process can be measured from the appropriateness of the quality, color, competitive price, the amount required, and the varieties of leather which should consist of artificial and original. Following Kotler & Susanto [4], for the variable of accessories, the purchasing process is measured from its quality, price, and appropriateness of the quantity when they are received by the company. In addition, for the sol variable, the purchasing process is measured from the type of plastic, sponge, the competitive price, rubber type, and the ordering process should be appropriate with the quantity when these goods are received. Moreover, for the glue variable, the purchasing process is measured from its quality, price, and the ordering process should be appropriate when it is quality, and the delivering process should be adjusted to the quantity of the order.

The manufacturing variable was made from the finished product and half-finished product. The finished product was the final product of manufacturing process that was ready to be marketed (sold) to the customers. The variable of finished product was measured from the appropriateness of the number of products, model, quality, and competitive price [1]. Meanwhile, the half-finished product was the product made from the raw material into product that still needs to be completed into final product. The variable of half-finished product was measured from the appropriateness of the number, the specification, quality, and competitive price [5].

Distribution variable was conducted from distribution and sub-distribution. Distribution was measured from the service, the expansive distribution relation, and competitive price. While the sub-distribution was measured from the service and competitive price [6]. The customer variable was measured from the color, model, price, and quality [3].

The question is then: "How good are the model and the effect of supplier variable, manufacturer, distributor, and customer to the marketing performance and sustainable competitive advantage?".

The objective of this research was to get to know about the model and the variable effect of supplier, manufacturer, distributor, and customer to the marketing performance and the sustainable competitive advantage. To achieve this purpose, the researcher recommended some strategy and business tactic in order to keep on its existence.

2. MATERIAL AND METHODOLOGY

2.1. Research Data

The questioners were given to both competent entrepreneurs and craftsmen belonged to the member of association of shoe and sandal craftsmen in Wedoro, Sidoarjo. The analysis unit of the research was the perception of the entrepreneurs and craftsmen to the company. The entrepreneurs and the craftsmen became the subject, and the association and the craftsmen became the object of the study. The questioners were given to 120 entrepreneurs and craftsmen who were very concerned with the shoe and sandal association in Wedoro. However, having been in re-investigated, there were only 100 questioners that consisted of complete data. Therefore, the number of sample required in this research was 100 samples. This quantity had fulfilled the assumption requirement of manufacture that needed the number of sample not less than 100 [7,8]. The measuring skill required was 7 (seven) digits [9].

The next step was the selection of input matrix and estimation technique to the model that was built. After the estimation was conducted, in fact, it could not be estimated, or "*Warning Error*" occurred. Therefore, it was required some steps to choose the input matrix by assuming the formation variable, that was supplier variable (X) that could not be arranged from leather variable (X1), accessories variable (X2), sol variable (X3), yarn variable (X4), and glue variable (X5). These 5 constructions were Unobserved Exogenous. After that, the indicators from those 5 constructions were taken as supplier indicator (X). This could also be done for the formation variable of manufacture and distribution. From this process, it could be obtained: the finding was taken from the concept of 2 steps into 1 step. While in the new model, it could be obtained the same indicator, but the material of questioner was different from the result of the questioner taken from the 2-step model [10].

The first treatment of *Tool Amos* [11]. was by conducting the test of measurement model. This test could be concluded that some dimensions required by the researcher did not reflect the permanent variable to analyze. However, all indicators with the value of C.R > t-table. This analysis could be concluded that those indicators were quite significant for the dimension of permanent variable being formed [7,8]. The second treatment was by conducting model structural test. The result could be concluded that the dimensions required by the researcher did not reflect the permanent variable to be analyzed. The next was by making modification model. To obtain a good model, the researcher had to re-arrange the strategy and tactic of business. To make a modification, check the data of modification index by selecting the highest value, then it was connected. If the result were still less than what we expected, do the same thing by selecting the highest modification index until a good model could be obtained [12].

3. RESULTS AND DISCUSSION

Test model after the change from one step two step so

3.1. Measurement Model

Table 1. Goodness of Fit and Cut off Value

Criteria	Model Test Results	Critical value	Information
X^2 Chi square	761,3266	Small, X^2 with df = 650 and α = 0.05 is 710,4212	Not good
Probabilitas	0,331	≥ 0,05	Good
Cmin/DF	6667,796	≤ 2,00	Not good
RMSEA	0,041	≤ 0,08	Good
GFI	0,254	≥ 0,90	Not good
AGFI	0,777	≥ 0,90	Not good
TLI	0,852	≥ 0,95	Not good
CFI	0,962	≥ 0,95	Good

Sources: *Primary data processed*

Table 2. Goodness of Fit and Cut off Value Structural Model

Criteria	Model Test Results	Critical value	Information
X^2 Chi square	752,5613	Small, X^2 with df = 725 and α = 0.05 is 788,7504	Good
Probabilitas	0,232	≥ 0,05	Good
Cmin/DF	3.761	≤ 2,00	Not Good
RMSEA	0,159	≤ 0,08	Not Good
GFI	0,812	≥ 0,90	Not Good
AGFI	0,705	≥ 0,90	Not Good
TLI	0,693	≥ 0,95	Not Good
CFI	0,763	≥ 0,95	Not Good

Sources: *Primary data processed*

Table 3. Goodness of Fit Indices Modification Model

Criteria	Model Test Results	Critical value	Information
X^2 Chi square	752,0503	Small, X^2 with df = 745 with α = 0.05 is 809,6087	Good
Probabilitas	0,421	≥ 0,05	Good
Cmin/DF	1,03	≤ 2,00	Good
RMSEA	0,016	≤ 0,08	Good
GFI	0,954	≥ 0,90	Good
AGFI	0,905	≥ 0,90	Good
TLI	0,997	≥ 0,95	Good
CFI	0,998	≥ 0,95	Good

Sources: *Primary data processed*

Tabel 4. Regression Weight Modification Model

			Estimate	S.E.	C.R.	P	Standardize Reg Weight (λ)
y1	<---	X	1,038	0,192	5,419	0,000	0,969
y2	<---	y1	0,919	0,159	5,774	0,000	0,922
y3	<---	y2	1,198	0,163	7,353	0,000	0,999
y4	<---	y3	0,673	0,113	5,972	0,000	0,968
y5	<---	y4	1,439	0,242	5,955	0,000	0,906

Sources: *Primary data processed*

For the formation variable, supplier could not be proved because of "Warning Error" or it could not be estimated by software AMOS 6. This could happen because this software expelled some kinds of instruction to variable of leather Supplier (X1), accessories Supplier (X2), Sol Supplier (X3), yarn Supplier (X4), and glue Supplier (X5) that became Unobserved Endogenous variable. This could be assumed whether some materials of those variables were thrown out or not, so that the path diagram that previously used the two-step, then it was changed into one step.

Table 4 showed that Supplier (X) positively affected directly as much as 0,969 to the Manufacture with the CR value: 5,419. This point was quite significant as it was higher than ±2,011 (this could be seen from table –t with df=48 and Sig.0,05). Its tactic could be assumed that the point 0,969 would be meaningful if the *Supplier* increased as many as 1 unit. This might cause the contribution increase to the manufacture as much as 0,969 times. Each unit was focused on the increase of the activity in some indicators of leather, accessories, sol, glue, and yarn supplier. According to aggregate estimation, the frequency distribution was still considered as medium criteria; therefore, its contribution needs to be increased.

For the formation variable, many factors could not be proved because of '*Warning Error*'. Or it could not be estimated by using software AMOS 6[11], because this software expelled some instruction to the variable of finished goods (Y 1.1), and the variable of half-finished goods (Y 1.2) that became the variable of *Unobserved Endogenous*. This could be assumed that some material was thrown out (this was not formed by the finished goods variable (Y 1.1) and the half-finished goods variable (Y 1.2)). The path diagram that was previously used 2-step; it was changed into 1-step.

Table 4 showed that manufacture (Y 1) directly affected, positively as much as 0,922 and significantly to the distributor, with its C.R: 5,774 that had already been significant because it reached up to higher than 2,011. The tactic reaching up to 0,922 was said to be meaningful if the manufacture increased as many as 1 unit. This might cause the contribution increased to the distributor as many as 0,922 times. Each unit was focused on the indicator of finished and half-finished goods. According to aggregate estimation, this criterium was still classified medium, so that the contribution needed to be increased.

Furthermore, the formation variable of Distributor (Y2) could not be proved because of '*Warning Error*'. In other words, it could not be estimated by using software AMOS 6 because this software expelled the instruction to

distributor variable that was conducted by itself (Y 2.1). While Distributor variable undertaken by sub-distributor (Y 2.2) that became the variable of *Unobserved Endogenous* could not be thrown away so that the path diagram which previously used 2-step, finally it was changed into 1-step.

Table-4 showed that Distributor (Y2) directly affected positively and significantly to the customer. Actually, within the C.R: 7,353 has already showed its significance because the value was higher than 2,011[22,24]. Meanwhile, the result of regression coefficient between distributor and customer was positive with the point: 0,999. According to its tactic, this point (0,999) would be meaningful if the distributor increased 0,999 times. Each unit was focus on each distribution indicator. As in aggregate estimation, this point was still considered to be medium, this needed to be increased and paid more attention [10].

Table 4 showed that Customer (Y3) directly affected positively and significantly to the customer with its C.R: 5,972. This point had showed significantly because the value was higher than 2,011. Meanwhile, the result of regression coefficient between distributor and customer was positive. The point was 0,968. This tactic could be said that the point 0,968 was meaningful if the customer increased as many as 1 unit. This might cause the increase of distribution to the marketing performance was 0,968. 1 unit was focused on the customer indicator. According to aggregate estimation, this was still in the medium level. Therefore, it needed to be increased and paid more attention [10].

Table 4 showed that Marketing performance (Y4) directly affected positively and significantly to the Sustainable Competitive Advantage (Y5). Its C.R was 5,955 that had already showed significantly because its point was higher than 2,011[22,24]. Meanwhile, the result of regression coefficient between marketing performance and sustainable competitive advantage was positive because its value was 0,906. Therefore, its tactic could be said that 0,906 would be meaningful if the marketing performance increased as many as 1 unit. This might cause the increase of contribution to the sustainable competitive advantage. Each unit was focused on the indicator of Marketing Performance because according to aggregate estimation, this point was still considered to be fair (sufficient). Therefore, this point needed to be increased and paid more attention [10].

This was the first time for the researcher not to throw out the dimension that had not reflected the permanent variable to be analyzed. This could happen because there was a set of modification in the tool SEM. This condition made its modification model become more complicated. Therefore, it was suggested to the next researcher to throw out the un-valid indicator. Moreover, the researcher found one model how to make all indicators be good, e and z should be connected each other. This means that one industry has to keep on coordinating well between one department and another. Therefore, if one company (one industry) wants to keep on its existence, it has to increase its marketing performance and it should have sustainable competitive advantage. According to the aggregate estimation and evaluation of frequency distribution, the result of the research was still classified medium. This also happened at the indicator of sustainable competitive advantage. Therefore, this point needed to be increased or its contribution needed to be paid more attention to keep on its existence. All variables showed that there was a significant effect according to the good theory of Supply Chain Management (SCM). In this case, a good coordination and positive activity on indicator should be well increased for its existence.

The model change from 2-step into 1-step might cause 2 up to 5 of the same indicators arouse. This did not make any problem because the indicator used to measure the model was by using the previous data (2-step model). Therefore, that is why the material for the questioner was different from the other. Finally, the variable reliability showed that all variables used had already been reliable because its value was bigger than 0,70.

4. CONCLUSION

Based on the research conducted in the shoe-sandal craftsmen association located in Wedoro, Sidoarjo, East Java, it can be concluded as follows: Having analyzed the measurement model and structural equation modeling, it could be found that the model was not so good. Therefore, it needs some modification to make it better model. In this new model, Supplier affects significantly to the Manufacture; The Manufacture affects significantly to the Distributor; The Distributor affects significantly to the Customer; The Customer affects significantly to the Marketing Performance; The Marketing Performance affects significantly to the Sustainable Competitive Advantage. All variables in fact provide significant effect. In order to make its tactic keep on its existence, there must be a good coordination and an activity increase of all indicators.

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Vol. 4
No. 1
January
2012

ISSN: 2075-4124
E-ISSN: 2075-7107

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Azerbaijani carpets

Azerbaijani Carpets have made the UNESCO list of Intangible Cultural Heritage of Humanity list. The Azerbaijani carpet is a traditional handmade textile of various sizes, with dense texture and a pile or pile-less surface, whose patterns are characteristic of Azerbaijani nearly carpet-making regions. Carpet making is a family tradition transferred orally and through practice. Men shear sheep in spring and autumn, while women collect dyestuffs and spin and dye yarn in the spring, summer and autumn. The weaving is undertaken during winter by the female members of the extended family, girls learning from their mothers and grandmothers and wives assisting their mothers-in-law. The carpet is made on horizontal or vertical looms using multi-coloured wool, cotton or silk yarn coloured with natural dyes. Applying special techniques to create pile carpets, weavers knot the pile yarn around threads of the warp; pile-less carpets are variously made with interlacing structural warps, wefts, and patterning wefts. The cutting of a finished carpet from the loom is an unusually solemn celebration. Carpet weaving is closely connected with the daily life and customs of the communities involved, its role reflected in the meaning of the designs and their applications. Thus, girls weave on carpets tell fortunes and sing traditional songs at Nevruz (the regional New Year). The carpet is widely used for home furniture and decoration, and special carpets are woven for medical treatment, for wedding ceremonies, the birth of a child, mourning rituals and prayer.

Today, the Azerbaijani school of carpet weaving is flourishing. The country takes measures to develop carpet weaving, the national treasure of the Azerbaijani people, and to preserve this ancient folk craft. Azerbaijani carpet-making is enriched by the projects implemented by the Heydar Aliyev Foundation (the greatest patron of Azerbaijani culture) and its president, UNESCO Goodwill Ambassador, First Lady of Azerbaijan Mrs. Mehriban Aliyeva. The work, conducted to develop the ancient craft, further enhances the national and global value of Azerbaijani carpets.

The nation's future success lies with science and education!

Heydar Aliyev
National Leader of Azerbaijan

INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH

Vol. 4. No. 1
January 31, 2012

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PROGRESS® IPS LLC
Baku, Azerbaijan, 2012

INTERNATIONAL JOURNAL of ACADEMIC RESEARCH

Vol. 4, No. 1, January 31, 2012, Part B

Publishing consortia
Print ISSN: 2075-4124
Online ISSN: 2075-7107
National reg. No: 2596

Editorial office:

AZ12, I Qaqarin str., Baku, Azerbaijan
Web: www.ijar.lit.az
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Nəşrə həvalə olunub: 28.06.2012
Materialın qəbulu: 20.11.2010-20.12.2011, Çapa məsləhət: 28.01.2012
Format: 60x84 1/8. Şərti çap vərəqi: 24.0 Sifariş № 210 Tirac: 200

PART B